

What is claimed is:

1. An information routing system comprising:

at least one control processor component;

at least one service termination component;

control plane logic including box management control logic isolated to the
at least one control processor component and routing control logic distributed
across the at least one control processor component and the at least one service
termination component;

forwarding plane logic separate from the control plane logic and
distributed across the at least one control processor component and the at least
one service termination component;

routing table management logic distributed across the at least one control
processor component and the at least one service termination component;

a control interface for transporting control plane information between the
at least one control processor component and the at least one service termination
component; and

a routing fabric separate from the control interface for transporting
forwarding plane information between the at least one control processor
component and the at least one service termination component.

2. The information routing system of claim 1, wherein the control interface
comprises a 1 Gigabit Ethernet backplane bus.

3. The information routing system of claim 1, wherein the routing fabric
comprises a 640 Gigabit routing fabric.

4. The information routing system of claim 1, wherein the at least one control
processor component comprises:

a first processor for executing the box management control logic; and

a second processor for executing the routing control logic.

5. The information routing system of claim 1, wherein the at least one service termination component comprises a processor for executing the routing control logic independently of the forwarding plane logic.

6. The information routing system of claim 1, further comprising:
at least one fabric component for managing the routing fabric.

7. The information routing system of claim 1, wherein the distributed routing table management logic is operably coupled to learn local and remote routes and to distribute local best routes to peer control processor components and service termination components.

8. The information routing system of claim 7, wherein each peer component stores all routes it receives through the distributed routing table management logic.

9. The information routing system of claim 7, wherein each peer component stores only routes it receives through the distributed routing table management logic that will be immediately used and discards routes that will not be immediately used.

10. An information routing apparatus comprising:
at least one control processor component;
at least one service termination component;
control plane logic including box management control logic isolated to the at least one control processor component and routing control logic distributed across the at least one control processor component and the at least one service termination component;

forwarding plane logic separate from the control plane logic and distributed across the at least one control processor component and the at least one service termination component;

routing table management logic distributed across the at least one control processor component and the at least one service termination component;

a control interface for transporting control plane information between the at least one control processor component and the at least one service termination component; and

a routing fabric separate from the control interface for transporting forwarding plane information between the at least one control processor component and the at least one service termination component.

11. The information routing apparatus of claim 10, wherein the control interface comprises a 1 Gigabit Ethernet backplane bus.

12. The information routing apparatus of claim 10, wherein the routing fabric comprises a 640 Gigabit routing fabric.

13. The information routing apparatus of claim 10, wherein the at least one control processor component comprises:

a first processor for executing the box management control logic; and
a second processor for executing the routing control logic.

14. The information routing apparatus of claim 10, wherein the at least one service termination component comprises a processor for executing the routing control logic independently of the forwarding plane logic.

15. The information routing apparatus of claim 10, further comprising:
at least one fabric component for managing the routing fabric.

16. The information routing apparatus of claim 10, wherein the distributed routing table management logic is operably coupled to learn local and remote routes and to distribute local best routes to peer control processor components and service termination components.

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17. The information routing apparatus of claim 16, wherein each peer component stores all routes it receives through the distributed routing table management logic.

10 18. The information routing apparatus of claim 16, wherein each peer component stores only routes it receives through the distributed routing table management logic that will be immediately used and discards routes that will not be immediately used.